



7. (Currently amended) The hybrid protein of claim 1 wherein the peptide epitope sequence is ~~6 to about 35~~ 9 to about 35 amino acids in length.

8. (Currently amended) The hybrid protein of claim 7 wherein the peptide epitope sequence is ~~6 to about 25~~ 9 to about 25 amino acids in length.

9. (Currently amended) The hybrid protein of claim 8 wherein the peptide epitope sequence is ~~6 to about 15~~ 9 to about 15 amino acids in length.

10. (Original) The hybrid protein of claim 1 further comprising a signal peptide.

11. (Original) The hybrid protein of claim 1 further comprising a protease processing site.

12. (Original) The hybrid protein of claim 1 which is a hybrid vespid venom allergen protein.

13. (Original) The hybrid protein of claim 12, which is a hybrid vespid venom antigen 5 protein.

14. (Original) The hybrid protein of claim 13 wherein the peptide epitope sequence is from the genus *Vespula* and the scaffold protein is from the genus *Polistes*.

15. (Original) The hybrid protein of claim 14 wherein the peptide epitope sequence is from the species *vulgaris*.

16. (Original) The hybrid protein of claim 14 wherein the scaffold protein is from the species *annularis*.

17. (Currently amended) An allergen hybrid protein having reduced allergenicity but retaining immunogenicity, comprising a peptide epitope sequence of an allergen protein and a scaffold protein that is structurally homologous to the allergen protein, wherein said hybrid protein

~~NNYCKIKC (SEQ ID: 1);~~

NNYCKIKCLKGGVHTACKYGSLKP (SEQ ID: 3);

NNYCKIKCLKGGVHTACKYGSLKPNCGNKVVVSYGLTKQ (SEQ ID: 5);

ID: 6);

(SEQ ID NO: 7);

(SEQ ID NO: 8)

LKPNCGNKVVV (SEQ ID NO: 9);

LTGSTAAKYDD (SEQ ID NO: 10);

PKKKFSGND (SEQ ID NO: 11)

~~IQIKWHK (SEQ ID NO: 12);~~

FKNEELYQTK (SEQ ID NO: 13);

NNYCKIKCLKGGVHTACKYGSLKPNCGNKVVVSYGLTKQEKQDILKEHND

(SEQ ID NO: 93);

NNYCKIKCLKGGVHTACKYGSLKPNCGNKVVVSYGLTKQEKQDILKEHND

FRQKIAR (SEQ ID NO: 94); and

NNYCKIKCLKGGVHTACKYGSLKPNCGNKVVVSYGLTKQEKQDILKEHND

FRQKIARGLETRGNPGPQPPAKNMKN (SEQ ID NO: 95).

18. (Original) The hybrid protein of claim 1 wherein the peptide epitope sequence comprises a conservative amino acid change.

19. (Previously presented) The hybrid protein of claim 18 wherein the peptide epitope sequence comprising a conservative amino acid change is characterized as reducing antibody binding to the peptide epitope sequence by at least 50-percent relative to antibody binding to the peptide epitope sequence without the conservative amino acid change, in an *in vitro* assay, wherein the peptide epitope sequence comprising a conservative amino acid change is present in the assay at a concentration less than 10-fold greater than the peptide epitope sequence without the conservative amino acid change, and the assay measures binding of the peptide epitope sequences to an antibody directed against a polypeptide comprising the peptide epitope sequence.

20-35. (Canceled)

36. (New) The hybrid protein of claim 1 wherein the peptide epitope sequence is from a grass pollen allergen selected from the group consisting of Cyn d 1, Dac g 1, Hol l 1, Lol p 1, Pha a 1, Phl p 1, Poa p 1, and Sor h 1.



45. (New) The hybrid protein of claim 1 wherein the peptide epitope sequence is from a tree pollen allergen selected from the group consisting of Aln g 1, Bet v 1, Car b 1, Cas s 1, Cor a 1, Que a 1, Fra e 1, Lig v 1, Ole e 1, Syr v 1, Pla l 1, Cry j 1, Cup a 1, Jun a 1, and Jun v 1.